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#### Rhetorical Exercises in School.

Rhetorical exercises usually comprise only declamations and compositions; but there is no reason why we may not introduce a variety of other exercises. Beginning with preparation—and this is by far the most difficult part of the work—prepare little by little; let every day contribute something for the closing of the week. The pupils soon learn that the songs they sing best, the gymnastics nearest perfection, the maps completed with the greatest swiftness and accuracy, will be brought out again on Friday afternoon. From all the spelling lessons of the week, the school will heartily enjoy the old-fashioned exercise of "spelling down;" and the classes in geography, arithmetic, history, etc., may occasionally recite down in a like manner. From the ground passed over in a month's time, or since the last similar drill, a great multitude of short, pointed questions will easily come to mind; and, by demanding prompt, accurate, and brief answers, the entire class will have something to do. The desire to be the last on the floor, and the enjoyment of the game—for it is a kind of play, as well as an examination—will spur the pupils to use all the time set apart for this particular branch, and the teacher will not be at a loss how to meet the frequent remark, "I have finished the lesson given out, and the time for study named in the programme is only half gone." Now and then, it gives a pleasant variety for the history class to recite only dates and locations, and the afternoon is rendered more enjoyable by interspersing among the lengthy exercises short ones so arranged as to interest the entire department at the same time. The mathematical review, put in the form of what is sometimes called "mental gymnastics," will be enjoyed by pupils of all ages. To illustrate: 8 times 12, plus 4, divided by 5, plus 5, take the square root, multiply by 80, subtract 225, divide by 25, subtract 3, raise to the third, add 6, divide by 10, add 9, take away 16, and multiply the remainder by 18; what is the result? At first, to insure exactness, the teacher should allow the result of each operation to be given, and should repeat the example in a very moderate manner; but as the pupils gain skill, he needs to hasten the work, till the example is given as rapidly as the words can be spoken. At the end let every one who has a result rise. This will rest the body as well as the mind. Here are others: Beginning with 1 or 2, add 3's or 4's up to 100. Beginning with 1, name the prime numbers to 100, and then the composite numbers. Commencing with 100, and proceeding back to unity, give the multiples of 9 or 7. Let one of the pupils name a number, the teacher mention another, and the whole school follow at once with the complement required to form the latter. For instance, 18 being the first number and 35 the second, the complement is 17.

As the reading classes perform their regular duties through the week, the completion of each chapter should be followed by a review, and there is no better way of awakening interest and securing study than to call on individual members of the class, for the reading, from the rostrum, of the entire selection. Suggestions are then in place—how they should go upon and away from the stage, how the book ought to be held, etc. The teacher can go to the opposite side of the room also, and learn whether or not every word is easily heard. All these sugges-

tions, if kindly given, benefit the class as well as the one or two under drill. They may at first dislike to go to the front, but will very soon enjoy the recitation and prepare for it as they otherwise never would have done. Now select one who has succeeded in reading clearly and well, to read the same selection on Friday afternoon, and you have one thing well prepared. By and by you may introduce selections from newspapers, magazines, or other books, into the regular reading classes, and thus make a large part of your preparation within school hours. It is best to divide a lengthy selection between several pupils, each taking a limited number of stanzas or paragraphs. In such case, all should go to front together, and rise as they read. They gain, by this process, ease in sitting before an audience, which even public lecturers do not always possess. In the same classes, dialogues and recitations may properly be made ready, the simplest things often becoming quite interesting in the new shape they have assumed.

So much for recitations, dialogues, etc. But when and how shall original matter be put into shape? To begin: We cannot expect our pupils to prepare anything of their own until they have been taught how to write; and we all know how much "to write" means. The putting in shape, in fact, is the least of a long series of duties. You may not succeed with my plan, but you will be apt to have one all your own, if you begin at once with what seems to you practical and good. I believe two things necessary, and have never found a school-room so crowded that I could not have them, if I was quite determined in the matter. One is a composition class, and the other a regular time on the programme for oral instruction. The class need not be a daily one. In a full school it is better that it come, perhaps, twice a week. You have set apart thirty or forty minutes for a recitation in reading every day. A wise plan is to have your pupils read twice a week, recite in composition the [same, and, if there is no better time for spelling, use for that the remaining day.

During the fifteen minutes of oral instruction, various topics are to be discussed, many of which will furnish suggestions or thoughts for future essays. It may be the news of the day, a little extract from some journal, a doubtful query in science, a decision in which right and wrong are involved, a little question of politeness. I would have this a time for the mutual expression of opinions, when every one talks out just what he thinks in a kind and candid manner. The results of each day's talk should be written upon by one or more of the pupils for the closing day of the week. At this time an item of war news is brought in by the teacher. A map of Europe has been previously hung upon the wall, and a pupil is requested to locate the scenes described. All the long Russian names need not be memorized; but the general position of the forces and the countries involved in the trouble may be pointed out for the benefit of all. A general discussion follows of the causes of the war, of previous wars between the same nations; and many interesting items are given about the Russian people or their enemies, the Turks. Would it not be a judicious plan now, while all are reading and talking on these topics, to spend an afternoon with them? One pupil might have assigned to him a summary of the news of the week. Other topics like the following are to be given to other pupils: "The Mohammedan Religion," "Constantinople," "The Crimean War." Perhaps some one can bring a Koran, and a pupil be requested to read the titles of some of the chapters and a few extracts from them. "The Koran, its History and Influence," would serve as another topic for a composition. Give out to several, for reading on the same day, paragraphs pertaining to the same subject. A few recitations, such as Bayard Taylor's "Camp Song," would be in order, in connection with which one of your singers might give you "Annie Laurie." A definite plan for Friday afternoon would be something like this: History and Biography, to be followed in turn by Science, Literature and Art, and occasionally an afternoon filled with miscellaneous matters. The

first Friday of every month set apart for one of these divisions; the second for another; the fifth, which comes only occasionally, being devoted to miscellaneous subjects, etc., is a most excellent arrangement. By History, I would not necessarily mean a repeating of facts alone, in precisely the order laid down in certain books; but an effort to get at the reasons of things, such as would come from the study of "The History of Inventions," "The History of Printing," or "The History of American Education," and many other similar topics.

It is best that one-half the school have something to do each week. The necessity of brevity will soon teach all to say the fewest words possible for the expression of the thought, and those the choicest words and right to the point.

I need not give many more illustrations. The summer days bring us objects of nature so full of mystery and beauty, that many afternoons would poorly suffice for studying so vast a world. Take the time for the insect world alone. The exercises may be put in the shape of essays or select readings, as you please. We shall begin by learning what insects are. Perhaps a poor, green caterpillar can be brought in, covered with the eggs of his parasite, the ichneumon, and preach a little sermon to us. The potato-bug is an excellent subject for an essay—the much abused spider, too; and that most persevering of all things living, "the ant." We will also have accounts from the pens of some of our best naturalists; and funny bits of poetry, scattered here and there among the more solid work, will help the time to pass pleasantly and profitably for all. Petroleum is another topic on which a whole afternoon might be passed, and still the subject need not be exhausted. These divisions are good ones: "The History of Petroleum" (a map of the world will here be required, on which the different localities may be pointed out); "The principal Oil-wells of the present time, and a description of how it is removed from the earth and prepared for market"; "The preparation of burning gas"; "Where do Gasoline, Paraffine, Benzine, and Naptha come from, and what are their properties?"; "Describe Kerosine, and give the tests now exacted by law in many of our states"; "Every man his own executioner,"—which would be the explanation of explosions, what brings them about and what they are, and an exposure of the "Rose Oil," "Burning Fluids," and other "non-explosive" compounds of a few years ago.

And let us not altogether disregard "fiction." A taste for Washington Irving, Dickens, and parts of Scott's works, will hinder the reading of poorer literature. And is not this quite true, that "there is more of truth than fiction in the higher kind of fiction," Whatever is done, however, let brevity, point, activity, and good-will be your watchwords. But teacher and pupil must use them, if they are ever anything besides "sounding words."—Mrs. Ford, in *Indiana School Journal*.

#### Importance of the Teacher's Work.

The rank and importance of the teacher's duties and profession are much overlooked and sadly underrated. The doctor, the minister, the lawyer, the statesman—in fact, all other professional workers—have their position in usefulness their standing in the world of society; but the common school teacher is unconsidered. Shifted about from place to place, staying the longest where they work the cheapest and are the most governed by others, a little looked up to by the lower and a good deal looked down upon by the higher classes, they are regarded as a sort of indispensable beings whom everybody is ready to dispense with upon the slightest provocation, who duties consist in keeping children in the school room, out of their parents' and other pupils' way, pouring into them as much Grammar, Geography and Arithmetic as they will possibly hold, without any facilities for performing the operation, without much effort on the part of the recipients, and living upon the smallest possible allowance.



Men will handsomely support merchants, thinking his wares indispensable, and would not think of refusing to the minister, since he must have his living. They will spend their last farthing in lawyer's fees, to obtain redress for some real or fancied wrong; will pay enormous sums for the enacting of laws and the building of jails for those who violate them—but when it comes to paying the teacher, how their pocket-books are thrust far down into their pockets, and how the clasps are tightened! And yet the merchant deals in food and clothing for the body, while the teacher feeds and clothes the immortal soul of which the body is but the fragile and short-lived casket. Moreover, there are many more hungry souls than bodies in the world, especially among the children.

The minister meets one day in the week a congregation upon whom his words and influence fall as waters upon the rock, while the teacher meets five or six days of the week with a congregation upon whom his or her influence falls as falls the rain upon the soft clay, each drop to leave an impression that shall remain throughout the life of the individual.

The greatest statesmen frame and enact laws, and the common school teacher holds in his hands, fashions and molds the material, which is to retain and utilize them or set them at defiance. On every side, men are demanding political reform; are looking for it in the platform of this that party, but they will look in vain. If ever found, it will be in the education of the coming generation, in the family, and the common school, and in no other place.

Those who have stood the test of war and revolution, who have remained firm and steadfast for Truth and Freedom, were not the people who stood the highest in art and culture, but the people in whom education of the masses was the most prevalent. Here was the secret of the subjugation of France. Though she possessed beautiful Paris, though she led the world in art and fashion, at least thirty per cent. nearly one-third of her population—could neither read nor write, while with the solid and more practical Germans, education was compulsory and universal.

Teachers themselves, oftentimes forget the importance of their work. It is such a hum-drum, tiresome routine, when you look at it from a material standpoint, calling up the first Reading class, the A B C and Arithmetic classes, the ditto Geography and Spelling classes, with perhaps a different book and class for every two or three scholars; looking at the same faces, some clean and bright, others dirty, prematurely old and sad, enforcing the same monotonous rules and regulations, day after day. But when you remember that Mary, with her unwashed face, her frowny red hair and and rough, unmannerly ways, is some day to become a woman, with all a woman's influence for good or evil; that Johnny, whom you tell fifty times a day to sit still and study his lessons, who gets into fights with the other boys at every recess, and is the plague of your life—is to become either a useful, respected member of society, or something to be ashamed of and avoided; that some of the little ones who come to you each day are from houses of drunkenness where love, order and decency are unknown; that some are from homes of avarice and parsimony where the beauty and sweetness of life are not found; that others are from the a odes of false appearance and dishonesty, where Truth and Uprightness dwell not—and, that they all are looking to you for that which they miss elsewhere, your duties seem something more than an equivalent for the paltry dollars you are paid, and it seems worth while to have some other aim and object than to get through the day, the week, the term, merely to receive your salary and take the long-contemplated pleasure trip. Your work takes on a grandeur and sacredness worthy of the greatest preparation, faithfulness, industry and sacrifice.

### Some Things I Know About Teachers.

ONE of the most serious difficulties in the way of some teachers is, that they have not the respect of their pupils. They have lost that commanding power and influence which will enable them to stand before their pupils and issue commands with the absolute certainty that they will be obeyed. They are even afraid to tell their pupils to do what they have a perfect right to command for fear that their commands will be disregarded. In such a state of case the sooner the issue is made the better, both for the teacher and the class, for the influence of such a state can only be injurious, and unless a speedy remedy is applied, disastrous failure is the teacher's certain doom. Obedience must be prompt and without a murmur. You cannot afford to argue the case. Make up your judgment before you issue the command, and then do not modify simply to suit the emergency which an impudent, impolite or pugnacious pupil may create. Be positive, but not spiteful. It is bad policy to descend in feeling and action to the level of a provoked child and it can only be done by compromising your dignity and influence.

Again, my experience warrants me in bringing the grave charge of dishonesty against some teachers. I do not mean by this that they will steal but that they are sometimes guilty of acts in the presence of their pupils, which are sure in the end to undermine their moral influence, and consequently their powers of discipline and control. Did you ever see a pupil cheat and allow it to go on without bringing the culprit to justice? Did you ever stand behind the examiner's back, and by a significant nod, or by some motion of the lips, attempt to telegraph the word to the pupil? Did you ever do, say, or imply anything that would lead your pupils to infer that you would look with the least degree of allowance upon any species of deception? If so, you have no claim to the obedience and respect of your class; and although they will gladly profit by such flagrant gain, they can only despise at heart the teacher who lends himself as an instrument to accomplish such base ends. Firm convictions of rectitude and honesty are the only abiding foundations on which to erect the superstructure of earnest work and good discipline.

Again, I see teachers inclined to be too severe with unfortunate and slow pupils. It is well to bring a strong pressure to bear upon your class, and one of the prime advantages of the graded system is that this pressure can be more persistently and successfully applied, but there is a limit which our anxiety for high per cents, should never cause us to overstep. No system of grading can make classes perfectly uniform, and no amount of drilling will bring all pupils up to a high standard of perfection. Study your pupils, learn their capacities and observe their diligence and whenever you find an honest, plodding pupil who is making an honest effort, he needs your sympathy and encouragement, and not your ridicule and abuse. You may regret to record his low standing, and bring down the average of your class, but you must bear in mind that examinations are not instituted to show the high per cents. of teachers, but to stimulate pupils to put forth an effort in the preparation of their lessons. The greatest good to the pupil should always be the controlling motive of the teacher, and in your recommendations and suggestions, you should endeavor to stand in loco parentis. Some pupils will require twice the allotted time to complete a grade, and so amount of detention in a lower will enable them to make a fair record in the next higher. See to it that you have good order and attention, that all your pupils are diligently at work, and that you are imparting the requisite instruction, and when you have reached this point, give yourself no uneasiness about per cents.

Again, I have noticed that, with some teachers, the concert forms and exercises which they pretend to observe are not only done bunglingly, but are a miserable failure, shocking to every sense of order and a disgrace to the room and the teacher. The teacher who can habitually tolerate such irregularity and want of precision, can have little system and plan about any of the multifarious duties of the school-room. There is as much of education in these disciplinary exercises as there is in a lesson in arithmetic, and the teacher who thinks differently has not learned to appreciate the close relation and dependence that mental development sustains to physical training and systematic muscular movements.

Again, the teacher's energies, efforts and powers belong to the school-room work and to his profession, and he has no right to dissipate and expend them in any other way. Our powers, both mental and physical, are capable of just so much work and endurance, and if this is expended in other exercises and pursuits, our success and efficiency as teachers will be seriously compromised. The man who studies some other profession while attempting to teach, the woman who gives her thoughts and time to domestic affairs or to society, without devoting a part of each day to earnest thought and the study of the science of teaching will never make much progress simply by the daily school exercises. It is only those who combine a close observation of the theories and experiences of others with their daily work, that are enabled to draw such wholesome lessons as will elevate and improve their work.

I would have little of a teacher's improvement in general culture or special fitness for the work, who would not set apart and sacredly consecrate a portion of each day to general intellectual culture, or the study of some special department of school work. A teacher ought to feel, and the true teacher does feel, that every new idea with reference to teaching, every addition to his general stock of knowledge is but adding capital to his personal estate, is laying up treasure "where moth and mould do not corrupt, nor thieves break through and steal." The teacher who does not feel thus has not accepted at heart the calling and has no claims to professional recognition and professional courtesy.

Again, some teachers fail to show at all times that dignity, bearing and good breeding which should characterize those of this profession. The manners of the teacher should be cultivated in the highest degree, but free from all affecta-

tion. How often is it the case that some little miss comes simpering home from a much laddered boarding school, saying fast and fast, and either and neither, simply because her teacher has mistaken affectation for good manners. Let your tone and bearing indicate culture and refinement without affectation, positiveness without snappishness, self-confidence without vanity, vigilance without a prying circumspection, and true piety without sanctimonious cant.—S. T. LOWAY, Supt., Owensboro, Ky.

### State Normal School at Whitewater, Wis.

THE attendance in the normal or teachers' classes has been 216; in the preparatory class, 49; and in all others, 116, giving a total of 381. The total number of teachers now employed is thirteen. The work in Latin has been greatly improved, much more careful attention being given to the elementary principles, to thorough drill in the grammar, and to the relations of that language to the mother tongue. The instruction in vocal music has been entirely revolutionized. It has not only a fixed place in the course, although many classes entering the school acquire a good knowledge of the principles, and are able to read and write music readily, but are trained to the art of teaching that, as well as the other subjects in the curriculum, and are thus prepared to lead music in their own schools when they shall have entered upon their professional duties. This instruction is carried through all the departments in daily lessons, from the primary model class upward. All the classes in the normal department engage in a general chorus practice two or three times a week.

In a similar manner, drawing receives its due share of attention throughout the school. The instruction and practice in this important branch are very systematic, able and thorough, under the supervision of Prof. W. S. Johnson. Drawing is taken up and treated from the standpoint of its basic principles, and not as a merely empirical and imitative art. It thus becomes a powerful discipline to the mind, as well as a means of ocular and muscular development. The blackboard is brought into constant requisition. The power of the left as well as the right hand is brought into play. The principles of symmetry are kept in view, and exercises with both hands, as well as of each, separately form a part of the course. Original designs, enlargements from copy as well as reductions, are among the means of securing diversity and skill in execution. The progress of the classes under these varied and masterly courses of treatment has been remarkable. The value of this drill to those who are to practice the art of illustration in the school-room, is beyond calculation. The aid it renders to the students in the other branches of study, is already very noticeable.

The art of teaching is systematically and minutely attended to. Not only the human mind, but the broader study of Human Nature, is made a subject of analysis and study as a basis for the practice of teaching, and the criticism that accompanies it. It is a great mistake to assume that mere teaching in a practice-room, with a little vague and empirical criticism, made by teachers of limited culture and experience, will answer the demands of a sound professional preparation. Prior to entering the school of practice, the members of the class to be thus assigned spend several weeks with the superintendent of the model school in the discussion of the mind, its faculties, the functions of each and the relations of the several branches of study to their development. The moral nature of the child, the means of influencing and controlling his conduct, the best means of arresting and holding his attention, and of inciting him to industry and self activity in his school work, are taken up in order and carefully considered.

In short, the tyro teacher is not allowed to go into the practice room without knowing for what he goes, what he is to do and how to do it. This preparation gives a point and sharpness to his practice not otherwise attainable, and makes his experience far more instructive and profitable than would otherwise be possible. By the means indicated, the professional work in this school is being both systematized and emphasized. It is beginning to assume its appropriate place and importance. It is not left to take its chances after every thing else has been done. The classes subjected to it are becoming deeply interested and profoundly impressed with its value; and its good fruits, it is believed, will in due time be made to appear in the superior skill and success of the graduates in the public schools of the State.

The senior class numbers eleven persons; there are eleven also in the junior class, making twenty-two now in the four years' course. From present appearances, the number of candidates for certificates in the elementary or two years' course in June next, will be between thirty-five and forty, which, with the seniors above noted, will make not far from fifty, to receive the honors of the school at the next commencement.

W. F. PHELPS.



From the Scholar's Companion.

# Reception Day.

## Statesmen of Athens.

BY MEMO.  
 "We must have written laws!"  
 The men of Athens cried;  
 And he who wrote with dragon's claws,  
 Fierce DRACO, them supplied.  
 The people were oppressed,  
 And slaves now filled the land:  
 When SOLON came, their wrongs redressed,  
 His fame forever stand!  
 The mountain, shore and plain,  
 Each wished to take the lead;  
 PEISTRATUS, the power to gain,  
 By his own hand did bleed.  
 The Spartans gave their aid,  
 And OLIMPERES installed;  
 Ten tribes instead of four, he made,  
 Was banished—and recalled.  
 The Persians threaten war,  
 On Marathon they land;  
 MILTIADUS defeats them sore,  
 With Græcia's little band.  
 The Persians disappear,  
 But further danger pends;  
 THEMISTOCLES, with foresight clear,  
 The naval power extends.  
 The courts of law were closed,  
 When ARISTIDES came;  
 The taxes, he, the just, imposed,  
 Untarnished left his name.  
 Laconia was in need,  
 And aid of Athens sought;  
 Then CIMON came and took the lead,  
 And deeds of valor wrought.  
 Next PERICLES appears,  
 The greatest of the great,  
 And Athens now for fifty years;  
 Becomes the leading state.  
 "Egea quick defend!"  
 Long cry the people all;  
 And ALCEBIADES they send,  
 And haste their country's fall.  
 At Egos Potami  
 Brave CONON was disgraced;  
 But CUIDUS made his name stand high,  
 His errors all erased.  
 As Græcia's fate is sealed,  
 Her last great man appears;  
 DEMOSTHENES, whose words have pealed,  
 Through many after years.

## Evening Bells.

(FOR RECITATION.)  
 Listen to the distant music,  
 Of the evening bells afar;  
 Wak'ning memories long forgotten,  
 As it trembles through the air.  
 Evening bells, I hear them ringing,  
 Thro' the dim and distant time;  
 Ah! what memories they are bringing,  
 As I list their swelling chime.  
 How it brings in view before us,  
 Childhood's ever happy hours,  
 When those same sweet tones stole o'er us,  
 Like the fragrance from the flowers.  
 Childhood's days, so full of blessing,  
 Days were those of pure delight,  
 Happiness each hour possessing,  
 Darkest gloom soon turned to light.  
 Gath'ring the scattered fragments,  
 Of those memories of mine,  
 To my heart that sound recalls them,  
 Like a melody divine.  
 And the surging, swinging music,  
 Of those bells, where'er I roam,  
 Ever turns my thoughts regretful,  
 Back to childhood's happy home.

## How to Make Money.

(FOR RECITATION.)  
 I will tell you a plan for gaining wealth,  
 Better than banking, trading or leases;  
 Take a bank note, and fold it up,  
 And you'll find your wealth increases.  
 This wonderful plan without danger or loss,  
 Keeps your cash in your hands and nothing to trouble it;  
 And every time that you fold it across,  
 'Tis plain as the light of the day that you double it.  
 Pitts-Green Hallack.

From the Scholar's Companion.

# Talks by Uncle Philip.

To-day, scholars, I shall tell you something about Russia. The street of a Russian city are picturesque, for sign boards abound and shop fronts are painted in staring colors—light blue, yellow and apple green. At the corner of almost every street you come upon a shrine of the Virgin, with a number of Russian signing themselves bareheaded in from. You meet the Virgin in various other unexpected places—in railway stations, in post offices, with a little oil lamp flickering at her feet—even in the drowsy look-ups, where tipsy Russians can be heard yelling all day and night.

The behavior of the people in the streets is quiet and civil. If a Russian knocks against you he begs your pardon with a sincere show of contrition; if he sees your nose turning white in the cold weather he picks a handful of snow and rubs it with brotherly officiousness till the circulation is restored. All along the populous streets peddlers saunter, selling dried mushrooms, cotton handkerchiefs, religious prints, white bread and cheese fritters.

Pigeons infest the roadways with impunity, for they are held sacred. Even if a Russian were starving it would not occur to him to knock one of these birds on the head and cook it. Dancing bears are also to be seen in great numbers, and, though not sacred, are great favorites, and always draw crowds, who laugh at their antics like children.

There is no man so easy to amuse as a Russian. In the popular theatres, he laughs till the tears run down his cheeks, and it is not rare to see him in the streets roaring before some French print exposed in a shop window. Russians are also fanatically fond of music, and all the tea houses are provided with some kind of organ on the musical box system. Now let me leave Russia and ask you

## "HOW MUCH IS MY BOY WORTH."

Some years ago, Horace Mann, delivered an address at the opening of some reformatory institution for boys, during which he remarked that if only one boy was saved from ruin, it pays for all the cost and care and labor of establishing such an institution as that. After the exercises had closed, in private conversation, a gentleman rallied Mr. Mann upon his statement and said to him:

"Did you not color that a little, when you said that all expense and labor would be repaid if it only saved one boy?"

"Not if it was my boy," was the convincing reply.

There is a wonderful value about "my boy." Other boys may be rude and rough; other boys may be reckless and wild; other boys may seem to require more pains and labor than they ever will repay; other boys may be left to drift uncared for to the ruin which is so near at hand; but "my boy"—it were worth the toil of a lifetime and the lavish wealth of a world to save him from the temporal and eternal ruin. We would go the world round to save him from peril, and would bless every hand that was stretched out to give him help or welcome. Every poor wandering, outcast, homeless man, is one whom some fond mother called "my boy."

From the Scholar's Companion.

# THE SCHOOL ROOM.

Good morning, scholars! You are all ready, I see, to begin the new year with hard study and good resolutions. Is it not so? Well, we will try you. Here are five problems, which are not very difficult. Who can solve them? Attention!

## Arithmetic Class.

1. I bought a quantity of lead pencils. I gave one-third away, sold one-half and lost one-ninth, and found I had one-eighteenth of what I first bought. What was the number?
2. Divide 33 in two parts, that shall be to each other as  $2\frac{1}{2}$  to 3.
3. Two men, A and B, were traveling together. A said to B, "If you give me \$5 of your money, I shall have three times as much as you will have left." B answered, "True, but if you give me \$6 of your money, I shall have four times as much as will remain in your possession." How much had each one?
4. Two men, on comparing their ages, found that the difference between them was eleven, but that if the age of the elder was divided by two, and that of the younger doubled, the difference was exactly that of the elder. What were their ages?
5. 100 O 50, 50 E 100 T 4 E. What word is this?

Next comes the lesson in Natural History. We will give you instances of intelligence in the dog, and a custom about birds in Norway. Any scholar who knows true anecdotes about animals may send them to us for our next lesson.

One of the prettiest of Christmas customs is the Norwegian practice of giving on Christmas day a dinner to the birds. On that morning, every gable, gateway and barn-door is decorated with a sheaf of corn fixed on the top of a long pole, wherefrom it is intended that the birds shall make their Christmas dinner. Even the peasants will continue to have a handful set by for this purpose, and what the birds do not eat on Christmas day, remains for them to finish at their leisure during the winter.

A lady of Londonderry, Vt., attempting to draw water from a well, was thrown into the well by the breaking of a board. The water was deep, but she managed to keep her head above the surface by clinging to the pump pipe. There was no person within sound of her voice, but the family dog, an intelligent and faithful animal, went to the well and looked in. Mrs. French asked him, as she would have asked a human being, if he could not get help. The dog took in the situation instantly, and bounded away towards the hayfield where Mr. French was at work. Arrived there he made a terrible uproar, and persisted in his wild actions, until Mr. French, fearing that something

had happened, followed him to the well, and saved his wife from drowning.

A child five years old was sitting before the fire eating nuts. The parents seem to have been away, and only one or two other little children were present. By some means the child's clothing caught fire, and in a moment she was enveloped in flames; the house dog, a common cur, sprang on the child, threw her down, and actually stripped off the burning clothing, burning himself severely. By the time the parents arrived, the noble dog had saved child's life.

ANNA BENTLY has her hand up. She says, "What relation is the Prince of Wales to William IV.? We will give the complete genealogy of the Prince of Wales:

Albert Edward, Prince of Wales, is the eldest son of Lionel, Duke of Clarence, who was the son of the Queen of England, was son of Victoria I., who is niece of Edward III., the son of William IV. and George IV. Edward II., the son of and daughter of Edward I., the son of Prince Edward, Duke of Kent, Henry III., the son of who was the fourth son of King John, the son of Frederick, Prince of Wales, who Henry II., the son of was the son of Empress Maude, the daughter of George II., who was son of of George I., who was the son of Henry I., the son of Sophia, Electress of Hanover, of daughter of William the Conqueror. Elizabeth, Queen of Bohemia, Henry I. married Matilda, who was the daughter of daughter of James I., who was the son of Margaret, Queen of Malcolm Mary, Queen of Scots, who was daughter of Scotland, who was daughter of Edward IV., and Elizabeth, Edward, who was the son of which princess was the un- Edward II., who was the bro- doubted heiress to the throne of England, re- Edward III., the Confessor sentative of the Red Rose, the only prince at that time being the daughter of in England who could pre- Edward IV., who was the son tend to any right to the crown. He was the son of Richard Plantagenet, Duke of Ethelred, the son of York, who was the son of Edgar, the son of Anne Mortimer, who was the Edmund I., the son of daughter of Edward, called the Elder, who Roger, Earl of March, who was was the son of the son of ALFRED THE GREAT. Philippa, who was daughter

The next lesson will be a sort of play. Two sets of "positives and comparatives," for you to guess the answers. A piece of music will be mailed to the one sending first correct answer to each. Attention!

## Grammar Class.

### POSITIVES AND COMPARATIVES.

#### NO. I.

1. A month; chief magistrate of a city.
2. A movement of a stream; bottom of a room,
3. To close; a close cover.
4. A fruit; an instrument to peel apples.
5. A curtesy; an arbor.
6. Bar for fastening; a sieve to separate flour from bean.
7. To restrain; to diversify.
8. To permit; an epistle.
9. A wager; superior.
10. To choose; one who has the right of voting.

ROSE ELMER.

#### NO. II.

1. To hinder; that by which the hole in any vessel is filled up
2. To flow; a long and narrow flag.
3. To sag; an empty boast.
4. To drive or urge forward; a screw.
5. The elevated spar of a vessel; a superior.
6. To close; a chest.
7. A trick; an artist.
8. A point; one who shaves.
9. A cereal; a small place.

R. G. EGGE.

Our next lesson will be in geography. We will give you some geographical derivatives, some of which you are familiar with. Attention!

## Geography Class.

Alpine—of or pertaining to or resembling the Alps.  
 Anglo Norman—pertaining to the English Normans.  
 Arabic—the language of Arabia.  
 Asiatic—belonging to Asia.  
 Belgic—pertaining to Belgium.  
 Caffre—a native of Caffaria in Africa.  
 Caledonia—native of Scotland.  
 Canadian—native of Canada.  
 Candiot—native of Candia.  
 Ceylonese—pertaining to Ceylon.  
 Cisalpine—an epithet applied to the countries on that side of the Alps next to France.  
 Coptic—pertaining to the Copts or ancient Egyptians.



*Corean*—relating to Corea.

*Cornish*—pertaining to Cornwall.

*Cortes*—the states or assembly of the States of Spain and Portugal.

*Gallican*—French.

*Hessian*—belonging to Hesse in Germany.

*Hibernian*—native of Ireland.

*Hindustanee*—pertaining to Hindostan.

*Italian*—native of Italy.

*Levantine*—pertaining to the Levant, a name given to the eastern part of the Mediterranean Sea and the countries bordering on it.

*Maltese*—belonging to Malta.

*Milanese*—native of Milan.

*Norman*—pertaining to Normandy.

*Norwegian*—relating to Norway.

**DICTATION EXERCISE.**—These should not be too long, nor too heavy. Something that will take the pupils' attention, and will interest and instruct. The following claims both these advantages.

#### LEAD PENCILS.

The graphite is first ground fine in water, treated with sulphuric and nitric acids, and, after washing clean, heated to a bright red. Then it is mixed with sufficient water to make it run freely, and allowed to pass slowly through a series of tanks until the water leaves the last one of the series almost clear, having left the graphite deposited and graded in the tanks—the deposit in that nearest the overflow, being the purest, is used for the finest pencils. The graphite after being taken from the tanks is dried, and then mixed with pipe clay obtained from Rotterdam, Holland, which has been purified in the same way as the graphite, only the very finest being used for pencils. Upon the amount of clay used depends the hardness of the pencil—the more clay the harder the grade. The clay and graphite is thoroughly mixed with water and ground like paint, but is passed repeatedly through the mills, as many as twenty-four times being considered as necessary for the finest grades. When ground sufficiently the pasty mass is enclosed in a canvas bag, and squeezed out by a powerful press, leaving the compound in the form of a stiff dough, which is placed into a cylinder of a forming machine, and by means of a piston, driven down by a powerful screw, is forced out at the bottom of the cylinder in the form of "leads" that, after being heated in a crucible to a red heat, are ready for insertion in the wooden blocks to cut into pencils.

The blocks are formed by sawing the wood into pieces as long as a pencil, six times as wide, and half the thickness, which are afterwards run through a planing machine that not only smooths them but cuts in each block six grooves half the thickness of the "leads." In the grooves in one block the leads are laid, a second block, previously coated with glue, is laid on the first, and a pile of these compound blocks are placed in a press, where they remain until dry. The blocks are next cut apart into six pencils each, by passing through a machine like a moulding machine, having two sets of cutters operating on opposite sides of the blocks, each of which cuts half way through the wood. The cutters in these machines are so accurately arranged, and run so true, that when the pencils leave the machine there is no mark to show the line of separation from the block either than the joint of the two pieces of the wood inclosing the lead, and said to be so smooth that sand-papering would roughen them. The shaping machine turns out about 72 per minute, or over 43,000 per day. The pencils are then varnished or colored by another machine, at the rate of 120 per minute, or 72,000 per day; and then polished in another machine at the rate of 106 per minute, or over 63,000 per day; all by unskilled labor.

**GRAMMAR NOTES.**—Let one of the scholars, a trustworthy one, have a small blank book, in which to take down all the wrong expressions in grammar, used by the class, such as "ain't you?" "I don't want nothing," "I have got," etc. with the names of the speakers. This will make them more particular in the use of their language, especially if the notes are read aloud once during a week. It would be well to have all slang words taken down also.

**MONITORS.**—It is well to appoint a number of monitors instead of only one or two. Some to see that the class-room is always in order; several for writing-books, pen, penwipers; monitors to take care of the windows and doors; one for slates; one for collecting maps and examples; one to keep account of late scholars in fact a monitor for every little thing which the teacher has to think about and attend to himself. Make the monitorship an important office, by having votes taken, or number chosen, and only those whose attendance is regular be appointed.

**A POST-OFFICE ROMANCE.**—Mr. John H. Hallett, one of the oldest employees in the New York post office, remembers that in 1835 a young woman used to call every week for a letter addressed "Miss Mary H. Russell, Post-office." The regularity of her visits, and her apparent unwillingness to give any account of herself, elicited much curiosity among the clerks but their inquisitiveness was never gratified.

Years passed away and gray hairs appeared on the woman's head, but she made her calls as regular as ever, and the expected letter was always waiting for her. Nearly ten years have elapsed since her last visit, but the letters still come addressed to her name, although the intervals between them are longer than in the old time. These letters have of course been opened, but they contain no clue to the identity of either the writer or the recipient. Each contains a \$5 bill, with a few lines of writing to say when the next remittance will be made. No address, no date, no signature. The handwriting is apparently that of a man feeble with age, and another letter with the usual superscription is, at present writing, lying unopened at the post office. Mary H. Russell, an elderly woman ten years ago, is probably dead. The letters, with their contents are sent to Washington, but no one can guess who the anonymous writer is who so faithfully maintained his correspondence. Post-offices are essentially practical places, but little bits of romance may sometimes be found even in their history.

*From the Scholar's Companion.*

#### A Great Painter.

MICHAEL ANGELO BUONAROTTI, commonly known as Michael Angelo, was born March 6th, 1475. His parents and relations had desired him to become a scholar, but he was so determined to become an artist that he carried his point, and took lessons for three years from an eminent painter. His master was engaged in the restoration of the choir of St. Maria Novella; thus he came at the first into the midst of a great work. One day at the dinner-hour, Michael Angelo drew a picture of the scaffolding and all that belonged to it, with the painters at work on it. When Domenico, his teacher, saw the paper, he was astonished.

"He understands more than I do myself," he exclaimed.

His rapid progress soon excited the jealousy not only of his fellow pupils, but of Domenico himself. Michael Angelo's first picture was an enlarged copy of "The Temptation of Saint Anthony." It was painted excellently, and his teacher claimed the merit, as it was painted in his studio. The picture is said to still exist at Bologna. Besides being a painter, he was a poet and sculptor, executing many admirable statues. Michael Angelo was anything but handsome; his head was broad, with projecting forehead; his eyes were small and light, and his nose, which had been crushed, seriously disfigured him. He was unmarried, and died February, 1564, in his eighty-ninth year; his body was carried to Florence and deposited in a vault. Most opinions concerning him are uniform in their expressions of praise; his name was the last word pronounced by Sir Joshua Reynolds, and even his great rival Raphael exclaimed—"Thank God, I have lived in the days of Michael Angelo!" His most extraordinary achievement is doubtless the ceiling of the Sistine chapel; the figures of this work are, for sublimity and grandeur, indisputably the triumphs of modern art.

PERCY BYSSHE SHELLEY, was born at Sussex, in 1792. He wrote two novels before he was sixteen, and at seventeen published a pamphlet entitled "The Necessity of Atheism," with a direct appeal to the heads of the college. As the result of this he was expelled. He is the author of several powerful dramas and of some long narratives and descriptive poems, but he is essentially a lyric poet, and as such is unexcelled. "The Skylark," "The Sensitive Plant" and the "The Cloud," are embodiments of the very spirit of poetry. In July, 1822, when he had not completed his twenty-ninth year, he was drowned in a storm, which he encountered in his own yacht on the Gulf of Spezzia. In obedience to his own desire, his body when thrown ashore, was burned under the direction of Lord Byron and other friends. The ashes were taken to Rome, and buried beside the grave of Keats.

"Hail to thee, blithe spirit!  
Bird thou never wert,  
That from heaven, or near it,  
Pourest thy full heart,  
In profuse strains of unpremeditated art."  
*The Skylark.*

WILLIAM COWPER, the poet, was born in Hertfordshire England, in 1731. He was appointed in 1763 to two clerkships in the House of Lords. The fear of appearance in public assemblies, developed the tendency to insanity which lurked within him. He made several attempts to destroy himself and was confined for eighteen months in a lunatic asylum. After his release he wrote several poems; but his fame however, was decisively established by his second volume, "The Task." The death of his dear friend Mrs. Unwin, threw him into a gloom, which was hardly ever again dispelled, and four years afterward, in 1800, he died. Cowper was distinguished for his poems and letters. Among the best of the former are: "Lines on my Mother's Picture," "The Task," his Hymns, and the humorous ballad of "John Gilpin." His letters are among the finest specimens of epistolary style in the language. They have fully been called "talking letters."

"Variety is the spice of life  
That gives it all its flavor."  
*The Task.*

**EARLY USE OF IRON AND STEEL.**—Iron was known at the earliest times of which we have any record. It is often mentioned in the Bible, and in Homer; it is shown in the early paintings on the tombs at Thebes; it has been found in quantity in the ruined palaces of Assyria; and in the inscriptions of the country, fetters are spoken of as having been made of iron, which is also so mentioned in connection with other metals as to lead to the supposition that it was regarded as a common metal. The native races of Africa and India now make wrought-iron. The supply of iron in India as early as the fourth and fifth centuries seems to have been unlimited. In temples of Orissa iron was used in large masses as beams or irdgers in roof-work in the thirteenth century. If we look still further to the East, China had probably knowledge of the use of metals as soon as India, and, moreover, had a boundless store of iron and coal. The Romans worked iron extensively in the Weald of Kent, as is shown by the large heaps of slag containing Roman coins which still remain there.

**A SMART BOY.**—The Reading Times has the following in reference to a 12-year-old boy named Augustus Moeck, residing in Stouchsburg, that State, and who, as alleged, has had but fifteen months' schooling: "Notwithstanding educational disadvantages he writes an elegant hand, is an excellent mathematician, and converses fluently in the English, German and Swedish languages. He reads correctly the most difficult passages in English prose and poetry, and translates readily from the English into the German or Swedish languages without the use of a Dictionary. He will repeat any sentence that may be given him in English, and then give the translation immediately in the other languages. He is, moreover, possessed of a prodigious memory, and can repeat pages of history after several readings. He recently surprised the teachers and pupils of the Stouchsburg Sunday-school by reciting 1,092 questions and answers without mistake, which were committed to memory during the leisure moments of a single week, he having worked industriously during the same period at tobacco-stripping. This youthful prodigy was born in Sweden of very poor parents. A mother and sister reside in a hut near mount Pleasant, in Penn township; his father, who was formerly employed as a laborer on the South Mountain Railroad, is working at present in the State of New York. The boy resides in the family of Eli Jones, in Stouchsburg, and it bravely striving to make a living by hard, industrious work."

**HOW TO BE HANDSOME.**—All young people would like to be handsome. All cannot have good features—they are as God made them; but almost any one can look well, with good health. Keep clean—wash freely. All the skin wants is leave to act free, and it takes care of itself. Its thousands of air holes must not be closed.

Eat regularly, and sleep enough—not too much. The stomach can no more work all the time, night and day, than a horse. It must have regular work and rest. Good teeth are a help to good looks. Brush them with a soft brush, especially at night. Go to bed with cleansed teeth. Of course to have white teeth it is needful to let tobacco alone. All women know that. Washes for the teeth should be very simple. Acid may whiten the teeth, but it takes off the enamel and injures them.

Sleep in a cool room, in pure air. No one can have a cleanly skin who breathes bad air. But more than all, is order to look well, wake up mind and soul. When the mind is awake, the dull, sleepy look passes away from the eyes.

**A MUSIC-LOVING SPIDER.**—A western paper, says: "At the Catholic church, on a Sunday morning, before the service, an unassuming little spider can be seen curled up in his gauzy bower—probably wrapped up in his morning prayer. Let the lady organist but touch the keys, and with eager feet he will creep a couple of feet down the wall; and there his artistic soul will revel in the musical sounds produced by choir and instruments. When the service is over, with the dying echoes lingering in his predatory soul, he retires, it is hoped, with regenerate heart. The fact that the lady organist had a faithful and cherished auditor of this kind three consecutive years, who would crawl on to the piano, shows that this is no isolated case. And whatever may be the opinion of the unfeeling world, to the choir of that church he is endeared by months of association and musical appreciation."

A correspondent, in writing of a recent convention in the city of Cleveland, says: "The procession was very fine, and nearly two miles long, as was also the report of Dr. Perry, the chaplain."

A CALIFORNIA editor thus acknowledges a present of grapes, "We have received a basket of grapes from Mr. W., for which he will please accept our compliments, some of which are nearly two inches in diameter."



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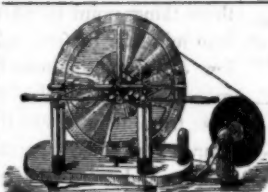
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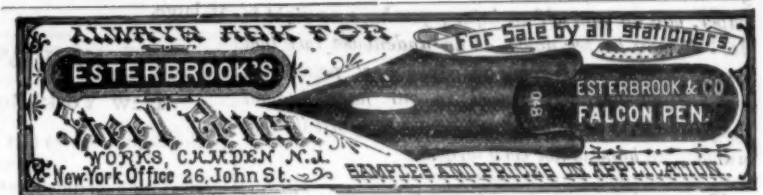


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protest against any reduction of the salaries paid to the teachers in the public schools. Cyrus W. Field was chosen as chairman, and Gen. Geo. W. Palmer secretary. After the reading of a series of resolutions Jos. H. Choate made an eloquent address. He said they were to consider the interests of the children; poorly paid teachers would give poor instruction; New York demanded the best education for its children; it was able and willing to pay for it. A reduction of salaries meant a cheaper education, and they were met to protest against this. Economy is necessary, but why begin with the moderately paid teachers? Why not cut off the useless Commissioner of Jurors, with his salary of \$15,000, and hundreds of other useless officers? Why not endeavor to stop the sale of rum, and thus be enabled to dismiss a great show of our police officers? The teachers in the primary schools average \$600, in the grammar schools, (female) \$767, (male) \$850. These are not too high; they were somewhat increased in the inflation times, but not in proportion to that in other professions. The lowest salary is \$500, and there is nothing left after board and decent clothing is paid for. Do we propose starvation wages? There is needed to carry on the schools \$3,900,000, but only \$3,400,000 was given. If this sounds large, remember there are 110,000 children to be taught. Last year \$2,700,000 was paid in salaries and that amount should be expended this year; all other things must give way to this; fewer buildings must be put up. I believe the Board of Education desire to do justice to the teachers. An examination of the scale of salaries shows great discrepancies. The present system needs a thorough revision; high salaries must be lowered; low ones must be raised; the hardest worked must get the best pay; no one must be paid who does not work and earn his money.

Gen. Palmer said there was no city where there was such an excellent class of teachers as in New York City. It was a system of unequalled merit. A child can enter the primary school and go as high as he pleases. The crowning stone to the edifice is the City College. That institution has done a great and lasting work; it is in the interests of every citizen to sustain it: it is open for the rich as well as the poor. Every class attends it; its corps of instructors are some of the ablest men in the world. It has been a grand help to the young men of the city when they have finished the studies of the grammar schools. The salaries of the teachers cannot be cut down and we do justice to this great system. We must not, on the plea of economy, begin to tear down the splendid system of public schools.

Lawson N. Fuller then made one of his telling but unreportable speeches. He referred to the splendid work of the Normal College; he believed there never was money so well expended as in education; the city never got the worth of its money in anything else but in education. Instead of spending less, it should spend more. He referred to the work of President Wood in terms of the highest praise.

Letters were read from Peter Cooper, R. D. Hitchcock and Wm. Cullen Bryant, who all declared their sympathy with the teachers.

Many prominent citizens sat on the stage. Among them, Mayor Ely, J. T. Agnew, Presidents Webb and Hunter, J. H. Dey, David D. Knapp, Edward Schell, P. Robertson, M. Morales. Most of the Board of Education were present and many teachers.

## LETTERS.

To the Editor of the NEW YORK SCHOOL JOURNAL

You requested me to give you my views; I told you they would meet with no approval, that the time had not yet come for the people to consider properly the terrific load they are carrying under the name of "the common school system," but you said, "never mind," and so I send them.

### THE PRESENT SYSTEM IS BAD.

It has been gradually adopted, but was never really intended to be taken in its present form. It is a matter very much of accident. The people want education; they think they cannot get it without all this machinery and that is the mistake. Originally it was expected that every man would pay for the education he got as he would for his boots and shoes; the new plan has been adopted to save the trouble of the rate bill to the poor children. This is admitted by all. The common schools were designed, in the cities, for the poor, but they are sought by the rich. Now, they say, as an excuse, that it is cheaper for all to club together, and have a tax levied. It may be, but that does not establish that it is the best way. The mistake was to run from the rate-bill to the tax system; what should have been done was to raise more money and lay it out in paying teachers under the rate-bill system. The defects of the system concern the scholars, parents and teachers. The scholars have little or no voice in the matter; the books are furnished, the studies are fixed and if the latter do not fit the former he is stretched or charged and not they. The result is that our schools are turning out every year a shiftless set of young men and women and every candid man

must admit it. There is not the fiber to the boys and girls there used to be; they do not know the subjects as they used; they do not think as they did; they have so much done for them they have become parrot-like; they are merely human beings that have been crammed with knowledge; they carry it about in a half digested state and take no interest in anything.

The parents have nothing to say and look on with apathy. They rarely visit the schools; they are unable to effect a change—here I have in view the city schools—and submit, for they see no other way except to send to a private school.

The teachers are wholly demoralized. The present plan lets in anybody who has influence and a certificate, neither of them testimonials of the slightest weight, hence, the school-rooms are full of people who ought never to see the inside of one. This fact is well-known because the principals will tell of it now and then. The style of principal has changed very much in the past twelve years since the system has got well under way. Think of such men as Scott, Kiddle, Harrison, Fanning, and others submitting to the dictation of Trustees and Superintendents as now enforced! They would not do it. The new style of principal has no authority; he draws like a horse ahead of a horse car. The present system has brought them to this. A Course of Study has been invented; so far must the teacher go and no farther; a pupil who has maturity of mind is classed with one who has none. The Arithmetic is made the basis of knowledge; a boy who has read Latin and Greek is put in with a boy who can hardly read in the Third Reader if he equals him in Arithmetic. The effect is dullness of mind—absence of interest, enforced attention and a general lack of appetite for knowledge. To help the poor boys and girls along they are threatened with "no promotion," and this is dreaded because they must then go over the same studies another year, when they know they ought to have been far ahead long since. This is, in brief, a faint picture of the evils arising from the present system, which has been lauded so much that people have thought it could not be excelled. Everybody in America believes in Education and this belief has been, like charity, a cloak to cover the multitude of defects that exist in the system. There is not a teacher living, who thinks at all, who will not acknowledge all this, provided he is sure he will not injure his position. Here are \$3,500,000 expended, and no one wants to lose a salary for a belief. Besides they will say there is nothing better, there is no other system; it is this or nothing. Still the fact remains with all the tinkering and blowing and puffing that the present system turns out very indifferent pupils; it has not the confidence of the parents and it is drawing into its ranks year by year, more of a class of people who have no teach in them; they are machinists; they run in ruts; they are capable of no enthusiasm, and can create none.

### FREE EDUCATION.

The present system is called by this name; it is wrong; it should be called State Education. This country could not bear the junction of State and Religion; the next worst thing is the junction of State and Education. What we want is "Free Education." By this I mean whoever has the gift of teaching in him should have the right to open a school and find the field free; he finds the field free if he wishes to start in the grocery, law, medicine or any other business. If he wants to teach he must run his legs off to get influence that will give him a place to exercise his divine gift, just as he would to get into the Custom House. There is a set who contract these places. They say they get nothing for their work and must make something by using their influence. Hence, we have a set of men who control the avenues to the schools and put in whom they like, not those who are fit. Many of these poor souls regret their appointment as long as they live. They are obliged to buy the place and pay a clear price. The story these could tell would be a pitiful one and tears would be shed over its reading; but it will never be told, for the teachers are too discreet. They draw the salary and when they can, they leave the place to some one else. In order to obtain the best effects from the large expenditure of money we must encourage all who have the art of teaching to come forward and engage in it.

### A SUPPOSITION.

Suppose for example, as each family has pictures on its home walls, some genius should insist on the State furnishing pictures to the families and pay for it by tax. Suppose further, the State should employ a force of men to paint these; and that a body of men appointed by the Mayor, were called The Board of Painting; and this Board should appoint five men in each ward to select artists. Of course as there would be the requisite amount of canvas covered with paint, there would need be some Superintendents, some Inspectors, and each gang of painters would need a head man. Yes, there would be considerable painting done, but Art would disappear. There would not be a good picture in the city, except on the walls of those who encouraged Fine Art,—that is that every one was free to try and if he succeeded was recognized and paid. Our

CONTINUED ON NEXT PAGE.

## Area and Circumference of the Circle.

By WM. OLAND BOURNE.

I.

LET AD represent a square whose side is unity, and let the perimeter be extended in a straight line, BC. Then BD, Dd, dc and cC will be the sides of the square, and the whole perimeter will be the line BC.

Let a circle be inscribed in the square having its center



at O, and draw the lines OB, OD; a triangle will be constructed whose base will be a side of the square, and whose altitude will be one-half the side of the square. The perpendicular let fall from the centre on BD will be the radius of the circle, and a sector of the circle will be contained within the triangle.

Let, now, the circumference of the circle be extended from the extremity of the line at B, and the line Bf will be equal to the circumference of the circle.

The measure of the circumference is the diameter multiplied by 3.1416—any side of the square, as AB or BD, multiplied by 3.1416. The area of the circle is  $1 \times .7854$ . Let the radius of a circle be 1, the area of the square will be 4, and the area of the inscribed circle will be  $3.1416 \div 4 = .7854$  = area of unity.

But the perimeter of the square of unity is  $1 \times 4 = 4$ , and the circumference of the circle is  $D \times 3.1416 = 1 \times 3.1416 = 3.1416$ . Now, 3.1416, the circumference  $\div 4$ , the perimeter of the square of unity, gives .7854 for the ratio of the circumference of the circle to the perimeter of the square. The ratio of the circumference and area of the circle to the perimeter and area of the square is therefore equal; and the circumference can always be found by multiplying the perimeter by .7854.

Let the square EB be constructed as in the figure, and let the circle be inscribed in the square. The sector aCb

will have the arc aCb for its base, and this arc will be in the ratio of .7854 to the base AB of the triangle ACB. The same will be true of all the triangles and all the sectors or quadrants; and the sum of all the arcs will be equal to the circumference of the circle. This circumference will be  $.7854 \times 4 = 3.1416$ ; and circumference  $(D \times \pi) \div 3.1416 + \text{perimeter } 4.00 = .7854$  = the ratio of circumference to perimeter.

A square whose side is 2, will have for its perimeter  $2 \times 4 = 8$ . The circumference of the circle is  $D \times 3.1416 = 8 \times 3.1416 = 25.1328$ . But the perimeter of the square  $= 8 \times .7854 = 6.2832$  = circumference.

A square whose side is 525 will have for its perimeter  $525 \times 4 = 2,100$ . This perimeter multiplied by .7854 will be the circumference of the circle  $= 2,100 \times .7854 = 1,649.34$ . otherwise, by the old rule,  $D525 \times 3.1416 = 1,649.34$ .

A square whose side is 1523— $1523 \times 4 = 6092 \times .7854 = 4,784.6568$ —the circumference of the inscribed circle; or,  $D 1523 \times 3.1416 = 4,784.6568$ .

The diameter of the earth is 7,912 miles. The sides of the circumscribing square— $7912 \times 4 = 31,648$ , the perimeter. The circumference by the rule  $= D7912 \times 3.1416 = 24,856,3392$ . But perimeter  $= 31,648 \times .7854 = 24,856,3392$ .

Prof. Leslie, in the Scholium to Prop. 32, book 6, speaks as follows:

"Hence, 3.1415926 is the nearest expression, consisting of seven decimal places, for the area of a circle whose radius is 1. But the semi-circumference in this case denoting also the surface, the same number must represent the circumference of a circle whose diameter is 1. Consequently, if D denote the diameter of any circle, the circumference will be expressed approximately by  $3.1415926 \times D$ ; whence the area will be  $\frac{1}{2} D^2 \times 3.1415926$ , or  $D^2 \times .78539815$ .

"Since the four last decimals, 5926 come so near to 6000, it will, in some cases, be sufficiently accurate to reckon the circumference equal to  $D \times 3.1416$ , and its area equal to  $D^2 \times .7854$ . But other approximations, expressed in lower numbers, may be found by help of Prop. 28, Book V. For  $m=3$ ,  $n=7$ ,  $p=16$ , and  $q=11$ ; whence, remounting successively from these conditional equalities, the ratio of the diameter of the circumference of a circle is denoted in progression, by 1:3—by 7:22—by 113:355—and by 1250:3927. Hence, also, the circle is to its circumscribing square nearly as 11 to 14, or still more nearly, as 355 to 453."

LESLIE, *Elements of Geometry*, p. 186.

It will be evident, from a comparison of these proportions, that the circumference, 113:355::1:3.1416. But the circle is 355:453. Hence, it follows that  $D=113:P=453$ , or exactly 1:4. In the proportion, 113 represents the diameter, and 453 ( $=113 \times 4$ ) represents the perimeter of the



square. Hence, also, as the circle is to the square as .7854 : 1, so also is the circumference to the perimeter—355 to 452—in the same ratio, that is, .7854 : 1.

Let the demonstration be constructed on the bisection of the hexagon, (Playfair, Sup. I, ix, Schol.) the circumference of the polygon of 6144 sides will be 6.283186, which is the circumference of a circle whose radius is 1. The perimeter of the circumscribed square being 8, the circumference is  $6.283186 \div 8 = .78539815 = (.7854)$ .

Cor. 1 (Playfair, Sup. Book IV.) gives the same proportion, for, "as the radius of any circle to the semi circumference, or as the diameter to the whole circumference, so is the square of the radius to the area of the circle." This ratio is equal to 1 : 3.1416  $\div$  4 = .7854 for both area and circumference.

The circumference and area of the circle being therefore, in equal ratio to the perimeter and area of the square, the circumference as well as the area of any circle may be found by multiplying the area and perimeter of the circumscribed square by .7854. Hence, for finding the circumference the following additional rule may be written:

To find the circumference of the circle.

RULE.—Multiply the perimeter of the circumscribed square by .7854; the product will be the circumference of the circle.

Or, what is the same thing, multiply the diameter by 4, and the product by .7854.

The area of a circle is equal to a rectangle whose base is a side of the square, and whose altitude is the side of the square multiplied by .7854.

## II.

There are several interesting properties of the circle and the square which may be observed in comparing the ratios of the area and perimeter.

The ratio of area of the square to that of the circle is 1.27323 : 1. If this ratio be used to represent the side of a square, the area will be  $1.27323^2 = 1.6211146 =$  square of ratio of areas. Let, now, the ratio of the inscribed circle = .7854, be also squared; then  $.7854^2 = .61685316$ . Then  $1.6211146 \div .61685316 = 1 =$  the square of unity.

If  $1.27323^2 (= 1.6211146)$  be multiplied by .7854, we have for the product the area of its inscribed circle, = 1.27323.

Let, now, 1.27323—the side, be multiplied by 4, the perimeter of the square is  $5.09292 \times .7854^2 (= .61685316) = 3.1416$ , the circumference of the circle whose diameter is unity.

If 1.27323 be multiplied by 3.1416, the circumference will be 4—the perimeter of the square of the unity; then this circumference  $= 4 \times .7854 = 3.1416$ , the circumference of the circle whose diameter is unity.

But perimeter  $5.09292 \times .7854 = 4$ , the perimeter of the square of unity.

Again:—the square root of the area of unity, .7854, is .89227, and the square root of area 1.27323, is 1.128379. Let 1.128379 be the side of a square  $\times 4 = 4.51328$ —the perimeter of the square whose inscribed circle is unity. Let this be multiplied by .7854, and we obtain the perimeter of the square whose area is equal to the inscribed circle of unity = 3.5449+. But the square root of 1.27323 is 1.128379  $\times \pi (= 3.1416) = 3.5449 \div 4 = .88623$ —square root of the ratio of circle .7854.

Other examples might be given exhibiting these properties of the area and the perimeter of the square and the circle, and the equality of the ratios of area and perimeter, but they are deemed unnecessary.

## III.

The square is a plane figure, the ratios of whose perimeter and area vary under different magnitudes. If the side be unity, the area will be 1, and the perimeter 4, or perimeter to surface as 4 : 1. If the side be 2, the perimeter is 8, and the area 4, or P:A::2:1. Conversely, the proportion will be A:P::25:1. If the side be 3, the area will be 9, and the perimeter 12, or A:P::9:1. When the side is 4, the perimeter and area will be 16, or 1:1. It will be seen that the increase is one-fourth for each unit added to the side. But from this point the area exceeds the perimeter, and ratio increases one-fourth for each unit added to the side, however greatly the magnitude may be increased. If the side be 8, the perimeter will be 32, and the area 64, or A:P::2:1. If the side be 10, the area will be 100, and the perimeter 40, or A:P::2.5:1. If the side be 144, the ratio of area to perimeter will be 36.

The following table shows the ratio of area to perimeter from 1 to 20, with several additional examples for comparison:

TABLE

Showing the perimeter and area of squares with the ratio of Area to Perimeter.

[The ratios of increase of area of the inscribed Circle is the same as those given in the table for the square.]

Side.	Perimeter.	Area.	Ratio, A:P.
1	4	1	.25
2	8	4	.50
3	12	9	.75

4	16	16	1.
5	20	25	1.25
6	24	36	1.5
7	28	49	1.75
8	32	64	2.
9	36	81	2.25
10	40	100	2.50
11	44	121	2.75
12	48	144	3.
13	52	169	3.25
14	56	196	3.50
15	60	225	3.75
16	64	256	4.
17	68	289	4.25
18	72	324	4.5
19	76	361	4.75
20	80	400	5.
24	96	576	6.
28	112	784	7.
32	128	1024	8.
36	144	1296	9.
40	160	1600	10.
50	200	2500	12.5
60	240	3600	15.
70	280	4900	17.5
80	320	6400	20.

Let the side of the square be 20, the perimeter will be 80, and the area will be 400. The circumference of the inscribed circle will be 62.832, and the area will be 314.16, both of which are in the ratio of .7854 to the magnitudes of the square. The circumference is nearly equal to the perimeter of a square whose side is 16, (= 65) and the area is nearly equal to the area of a square whose side is 18, (= 324.) But the circle whose circumference is 80, has an area of 490.875.

The circle, therefore, under any given circumference has a greater area than the square whose perimeter is equal, but any circle has the same ratio for the area and circumference to the area and perimeter of its circumscribed square—that is, as already proved, the ratio for area and circumference is .7854. The circle has also the same ratio of increase for each unit added to the diameter.

It will be seen by the table that the ratio of area to the perimeter of a square, or of its inscribed circle, can always be found by dividing the side or diameter by 4.

## CONTINUED FROM LAST PAGE.

Education has gone into a lamentable shape; it is done by the State and paid for by the State, and no person who has a call to teach can get a place—he needs influence. This has filled the school-rooms with second and third rate persons. Do you believe it? If not, look around and see. A less intelligent set is rarely to be found than a gathering of teachers.

## THE TRUE PLAN.

Now all this must give way. Let the appropriation of \$3,500,000 be distributed in this way. Let any one who chooses open a school; let him gather in all the pupils he can; let him receive from the city \$20.00 for every primary pupil he teaches for a year, \$25 for each grammar school pupil, and \$30 for each collegiate pupil. Let the teachers say who shall be considered as teachers, and fix the standard. Let the city rent the school buildings out to whosoever would give the most. There is no doubt but many of the principals would retain the floors and a few of their teachers. The pupils would have to go somewhere to school, they would still continue to go; those who were skillful teachers would be well patronized—the rest would go into some other business.

The 60,000 primary children would cost.....	\$1,200,000
" 40,000 grammar " " " " " " " " " " " "	1,000,000
" 2,500 collegiate " " " " " " " " " " " "	75,000

Total \$2,275,000

This shows that the city would afford to pay more than the sum of \$20 for each primary pupil, etc. The rent of the school buildings would bring in \$225,000 probably. There would be no need of Superintendents, Clerks, and all this fol-de-ra-l. No more new buildings would be needed. When the people of a new section can support a grocery one is opened, and so about schools. The people would send their children to school; let the American people alone for that.

## COMPULSORY EDUCATION.

This leads me to say a word about Compulsory Education. Goulding is right, it is a huge abomination. What, after so much has been done to foster education, will not the Americans send to school without force? Then a screw is loose. It did not use to be so. Splendid buildings, books full of pictures giving away, handsome desks, warm rooms fall to entice the children in because the system is wrong. It is made too common; change the plan. Let those who want education pay for it and they will come in. They used to.

## THE RATE BILL.

This was considered a very bad thing. But why? Why is a knowledge-bill worse than a medicine-bill? Pay for what you get is an old motto, and it applies to education. If I want education, let me pay for it in advance as I do for your JOURNAL; if I do not want it, or cannot afford it, I will go without it. There are a good many parents who

pay school bills, and do it very cheerfully, if their children learn. No, sir, a school-bill is nothing to be afraid of.

## THE POOR CHILDREN.

The city now supports the Children's Aid Schools and that is enough. If there was a boy or girl who would pay no more than the city allowance he could get into a school, he could get an education. No persons would be more glad than the teachers, to take in pupils free if they want to learn, they are famous for that. It is a mere bug bear to cry out that the present system favors the poor children, if so, what is the need of compulsory education.

## FINALLY.

I throw out these ideas and ask their perusal, if you Mr. Editor dare to print them. They are not the figment of a diseased brain; they are worthy of the careful attention of the Board of Education, and of every thoughtful citizen.

FREF EDUCATION.

## Newark.

A meeting of the patrons and friends of the Central Ave. Public School was held Friday Evening, January 11th.

It gives us much pleasure to give our readers a few notes of this interesting and instructive meeting. We rejoice in all steps of real progress.

Central Ave. Public School is located in the part of the fine city of Newark, and has been for years under the able direction of G. O. F. Taylor, Principal, Miss M. Morgan, vice principal, and eleven assistants, with thirteen classes of 50 scholars each.

These are under the able superintendence of W. N. Barringer, Supt., and they are (each one) treasuring up rich blessings in the minds and souls of pupils for all the future. A great legislator exclaimed, "give me the mothers of our land, and I will promise to control the people, and thus keep only our Public Schools in their present high condition and America's future glory and greatness is apostrophe certainty."

The occasion was a joyous one, and the fine large Public School filled with principals, friends and pupils.

This meeting was a novel one and proved a complete success, the friends, teachers and happy children departed rejoicing, all feeling that Central Ave. Public School had taken one step forward in the great and good cause.

We rejoice in all such tokens of real progress. Education is the great and vital question, and with its numerous tasks, and dry details we need frequent and happy reunions and pleasant festivals. We trust the time will come when thousands of our children will meet together for dime concerts and illustrated scenic and elocutionary exercises. Our teachers can easily impart lessons of truth, and instill beautiful thoughts, and feelings into the minds of their pupils new plans, and better methods. We all can impart and receive so much when in our happiest mood, and feeling a true love of the word. It is thus your souls catch good influence receiving lasting impressions of truth and love. LEO.

## MARS' MOONS.

When the telegraph announced the discovery by Prof. Hall that our neighboring planet had two satellites, and the dispatch was read the next morning at 10,000 American breakfast tables, what think you was the effect upon the hearers? Some colloquy similar to the following was sure to occur: "Mars has two moons, hey? Pass me the milk. Kitty. Strange, isn't it, that astronomers never saw them before. Another chop please. I wonder what they'll discover next? These corn cakes are excellent. What's the latest from Europe?" We have become so accustomed to startling discoveries and announcements that we take them as a matter of course. Even truth must appear in flaming colors to make herself seen. The virtues of Dr. Pierce's Golden Medical Discovery and Pleasant Purgative Pellets have been tested in ten thousand households, whose inmates will tell you that they consider the discovery and introduction of these remedies of far greater importance to the world than the moons of Mars.

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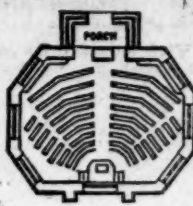
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In the place of bones we insert continuous rows of very stiff cord, which give all the support of bones, with the advantage of yielding to every movement of the Form, and of being washed without changing the fitness of the garment. Stylish and tasty as a French Corset, yet combining ease and comfort with elegance and shape, our Corset has the unqualified approval of every physician who has seen it. For children, the advent of this Corset marks a new era in Children's Waists. No movement of the arms can displace the shoulder sockets, stockings and skirts are always in position, and all is ease and comfort. Walking or running, sitting down or jumping rope, it is all the same. We lace the Lady's Corset, the child's waist buttons in the back, but is a perfect little corset in its beauty of fitness to the form. Each corset is stamped with TWO NUMBERS, signifying the TWO MEASUREMENTS, the first being the size in inches around the Waist, and the second around the Shoulders, and the variations are such that any lady or child can be easily fitted. For sale by retailers throughout the country, and wholesale by the

BOSTON COMFORT CORSET CO., No. 76 CHAUNCEY ST., BOSTON, MASS.

## Bryan's Electro-Voltaic and Magnetic Appliance.

This improvement embraces all the effective properties of old inventions without the inconvenience of using vinegar acids or other liquids to set them in motion. The metals are so nicely adjusted that the heat and moisture of the body are sufficient to cause the electro-voltaic current, and they are permanently magnetic as long as in good order. They are undoubtedly superior to anything of the kind offered for sale, and meet with the just commendation of our most eminent practitioners. They can be worn night or day by either sex with privacy, and without the least unpleasantness or inconvenience.

THEY ARE SELF-APPLICABLE, AND A SELF-CURE WITHOUT MEDICINE FOR ALL DISEASES ARISING FROM A LOSS VITAL FORCE: DYSPEPSIA, PARALYSIS, RHEUMATISM, EPILEPSY OR HYSTERIA, WEAK LUNGS, GENERAL DEBILITY, KIDNEY COMPLAINTS, IMPOTENCY, WEAKNESS, AND PHYSICAL PROSTRATION.

Pamphlets, with certificates from physicians and persons who have been cured, sent free on application. Dr. J. Bryan will advise free of charge in relation to treatment and nature of appliance. Address,

BRYAN APPLIANCE CO.,  
147 E. Fifteenth St., New York

## MISFIT CARPETS.

English Brussels, Three-Ply and Ingrain, also, Stair Carpets, Velvet Rugs, Crumb Cloths, Oil Cloths, etc., very cheap at the Old Place,  
**112 FULTON STREET, NEW YORK.**

Carpets carefully packed and sent to any part of the United States free of charge.

Send for Explanatory Circular

L. A. BENDALL

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CHAMBERSBURG, PA.

J. H. SHUMAKER, Ph. D., Principal.







## STEINWAY

Grand, Square, &amp; Upright Pianos.

In order to protect the public against imposition, and as a rebuke to unscrupulous advertisers, the Judges on Pianos at the Centennial Exhibition, 1876, (in addition to the two awards, one for the best piano, and the other for the best piano-forte material, decreed to Steinway & Sons by the United States Centennial Commission) have given to Steinway & Sons the following

## CERTIFICATE:

"This is to certify that the piano-fortes of Messrs. STEINWAY & SONS, comprising Concert and Parlor, Grand, Square and Upright, exhibited by them at the Centennial Exposition at Philadelphia in 1876, presented the greatest totality of excellent quality and novelty of construction, and in all points of excellence they received our highest average points, and accordingly our unanimous opinion concedes to Messrs. STEINWAY & SONS 'Highest degree of excellence in all their styles.'"

Extracts made and copied from the note books of the examining Judges, duly certified by them, reveal the significant fact that their ratings on each and every style of piano-fortes exhibited by Steinway & Sons were far above all other competing exhibitors, and reached a

GRAND TOTAL AVERAGE OF

96% OUT OF A POSSIBLE 96.

The next highest exhibitor's average only

90% OUT OF A POSSIBLE 96.

Steinway & Sons,  
WAREHOUSES—STEINWAY HALL,  
109 & 111 East 14th Street, N. Y.

QUAKER CITY ORGAN CO.,



Manufacturers of every variety of

REED ORGANS,

and Dealers in

PIANOS.

As early as 1859 a Medal was awarded Wm. F. Kennedy, the present manager, for the best instrument, by the State Agricultural Society of New Jersey, and wherever exhibited since have taken first premiums.

Prominent among their many advantages is a round full tone, very deep and powerful, yet sweet and sympathetic, with effects of rare beauty and originality, the prettiest in design and most perfect in touch and finish of any organs ever manufactured. The manufacturers of this unrivaled instrument, in order to more generally to introduce their organs, have made the GENERAL PUBLIC the unprecedented offer:

They will, where they have no resident agent, make the deduction usually made to their agent, and upon receipt of a duplicate Postal Money Order, or a Banker's Duplicate Certificate, stating that the purchaser has deposited to their credit the price of the organ ordered, send it on five days' trial, when, if it does not prove as represented by them, the purchaser may return it at the company's expense and withdraw the deposit from bank or post-office.

Schools, Teachers, Churches, Sunday Schools and Individuals, will receive the Agent's Commission where purchases are made direct from the Factory, if we have no agent in the place. ORGANS SENT ON TRIAL WHERE TERMS OF SALE ARE AGREED UPON IN ADVANCE. Every instrument fully warranted for five years. Correspondence solicited. Agents wanted everywhere. Address the

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**PIANOS.** Magnificent Brand New \$650 rose wood Piano only \$175, must be sold. Fine Reseconded Upright Pianos you. Address DIBBLE & CO., Chemists, 1855 Broadway, New York.

**ORGANS.** Parlor Organs 3 Stops \$45 5 Stops \$65 12 Stops only \$75. Nearly new 4 set Reed 12 stop sub Bass and Coupler Organ \$55 cost over \$250. Lowest Prices ever offered; sent on half month test trial. You ask why I offer so cheap? I answer Hard Times. Our employees must have work, the result, war commenced on us by the monopolist. Battle raging. Large illustrated Paper Free. Address DANIEL F. BEATTY, Washington, New Jersey. 324-26

**25 FASHIONABLE CARDS,** no Ave. silk, with name, 10c. 30 School, with name, 10c. post paid. Agents' outside, 10c. GHO. I. BEED & CO., Naman, N.Y.

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We will during these HARD TIMES and the HOLIDAYS dispose of 100 NEW PIANOS and ORGANS, of first class-makers at lower prices for cash, or installments, or to let until paid for, than ever before offered. WATERMAN'S Grand Square and Upright Pianos & ORGANS, are the BEST MADE, warranted for 5 years. Illustrated Catalogues Mailed. Great inducements to the trade. A liberal discount to Teachers, Ministers, Churches, Schools, Lodges, etc. PIANOS, 7-octave, \$140; 7-1/2 octave, \$150. ORGANS, 2 stops, \$45; 4 stops, \$53; 7 stops, \$65; 8 stops, \$70; 10 stops, \$85; 12 stops, \$90, in perfect order, not used a year. Sheet music at half price. HORACE WATERMAN & SONS, Manufacturers and Dealers, 40 East 14th St., N. Y.

## TESTIMONIALS.

The New York Times says: Waters' Orchestration Chime organ is a beautiful little instrument, simply perfect. The chime of two and one-half octave bells, and the artistic effects capable of being produced by the player are singularly fine.

The tone is full, clear and resonant, and a very interesting effect is produced with the chime of bells.—Christian Union.

The Waters' pianos are well known among the very best. We are enabled to speak of these instruments with confidence, from personal knowledge.—N. Y. Evangelist.

We can speak of the merits of the Waters' pianos from personal knowledge, as being of the very best quality.—Christian Intelligencer.

## PIANOS ORGANS.

## LICHTE and ERNST,

(Sole Successors to LICHTE &amp; BRADBURY.)

Manufacturers of first class Piano-fortes. Established 1840. Special rates to Teachers on easy Monthly Payments. Warehouses No. 12 East 14th Street, between Broadway and 8th Avenue. Also Sole Agents for Smith's celebrated American Organs.

## CHEAP PHYSICAL APPARATUS

FOR STUDENTS AND COMMON SCHOOLS.

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Prof. Tyndall's NEW collection of Electric instruments, designed to accompany his "LESSONS IN ELECTRICITY." Complete sets, consisting of 58 various apparatus and materials. Price, \$65. Tyndall's Manual, \$1.00. Descriptive price list free on application. All various school apparatus required in physics on hand or made to order. Excellent workmanship warranted. First Premium awarded!

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For ladies and children. These received the highest Centennial Award. The Judges' report highly commends them. They are all patented. Mrs. H. S. Hutchinson's is the original and only store entirely devoted to the manufacture and sale of these garments in this city. There are many spurious patterns that look like them; but these are the only ones that absolutely give health and comfort to the wearer, their sole merits. Circulars sent free on application.

Be sure and apply to

Mrs. H. S. HUTCHINSON,

6 East 14th Street.

## DYSPEPSIA

## CURED FREE.

A person suffering from Dyspepsia or indigestion will be cured by using

Dr. Willard's Compound Powders!

Send for a trial package, it costs nothing, and will cure you. Address DIBBLE & CO., Chemists, 1855 Broadway, New York.

**GRAND EDUCATIONAL EXCURSION TO EUROPE**, in the summer of 1878, visiting Ireland, Scotland, England, France, Belgium, the Rhine, Russia, Switzerland, Italy and the Paris Exposition. For Circulars, address

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## STATEMENT

## THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK.

F. S. WINSTON, President.

For the Year ending December 31st, 1877.

## Annuity Account.

No.	AMOUNT.	No.	AMOUNT.
Annuities in force, Jan. 1st, 1877...	\$26,068.88	Annuities in force, Jan. 1st, 1878...	\$28,900.61
Premium Annuities.....	6,393.46	Premium Annuities.....	6,174.00
Terminated.....	2,335.13	Terminated.....	2,752.85
59	\$34,827.46	59	\$34,827.46

## Insurance Account.

No.	AMOUNT.	No.	AMOUNT.
Policies in force, Jan. 1st, 1877, 95,195	\$301,578,037	Policies in force, Jan. 1st, 1878, 91,553	\$294,488,311
Risks Assumed.....	8,494	Terminated.....	9,066
300,619	\$328,229,353	300,619	\$328,229,353

## Revenue Account.

To Balance from last account.....	\$70,566,000.87	By paid Death Claims and Endowments (matured and discounted).....	\$6,109,538.83
" Premiums received.....	14,070,152.41	" " Annuities.....	31,979.88
" Interest and Rents.....	4,884,307.38	" " Dividends.....	3,568,161.57
		" " Surrendered Policies and Additions.....	4,739,426.47
		" " Commissions (payment of current and extinguishment of future).....	603,900.16
		" " Contingent Guarantee Account and Taxes.....	*733,886.96
		" " Expenses.....	797,493.73
		Balance to New Account.....	\$2,355,678.27
	\$98,439,361.60		\$98,439,361.60

\*Of this the sum of \$164,235.64 was paid to the different States that levy taxes upon the premiums of their people.

## Balance Sheet.

To Reserve at four per cent.....		\$80,057,941.00	By Mortgages on Real Estate.....		\$58,152,733.83
" Claims by Death, not yet due.....		486,787.00	" United States and other Stocks.....		16,900,611.17
" Premiums paid in advance.....		217,561.00	" Real Estate.....		5,725,035.65
" Surplus and Guarantee Fund.....		4,971,059.30	" Cash in Banks and Trust Companies at interest.....		1,701,622.57
			" Cash in transit Dec. 31, 1877 (since received).....		67,969.92
			" Interest accrued.....		1,438,647.92
			" Premiums deferred, quarterly and semi-annual.....		851,813.52
			" Premiums due and unpaid, principally for December.....		153,768.13
			" Balances due by Agents.....		38,115.14
		\$85,033,318.30			\$85,033,318.30

NOTE.—If the New York Standard of four and a half per cent Interest be used, the Surplus is \$10,669,443.60. From the Surplus, as appears in the Balance Sheet, a Dividend will be apportioned to each Policy which shall be in force at its anniversary in 1878.

## BOARD OF TRUSTEES.

FREDERICK S. WINSTON, ROBERT H. MCCURDY, WILLIAM BETTS, SAMUEL M. CORNELL, SAMUEL E. SPRUILL, LUCIUS ROBINSON, WILLIAM H. POPHAM, SAMUEL D. BARCOCK, WILLIAM SMITH BROWN,	HENRY A. SMYTHE, WILLIAM E. DODGE, GEORGE S. COE, WILLIAM M. VERMILYE, JOHN E. DEVELIN, MARTIN BATES, WILLIAM A. HAINES, SEYMOUR L. HUSTED, OLIVER H. PALMER,	HENRY E. DAVIES, RICHARD A. MCCURDY, FRANCIS SKIDDEY, JAMES C. HOLDEN, HENRY W. SMITH, GEORGE C. RICHARDSON, ALEXANDER H. RICE, WILLIAM F. BARCOCK, F. RATCHFORD STARR,	FREDERICK H. COSSITT, LEWIS MAY, OLIVER HARRISON, THOMAS DICKSON, HENRY W. SMITH, JOHN H. SHLEWOOD, GIUSTO P. FARRER, GEORGE H. ANDREWS.
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## THE WONDERFUL PEN-HOLDER!

**NO INK REQUIRED.** We have invented and patented (July 17, 1877) a Penholder which contains solidified ink to last years / and with which any pen can be used! / Once dipping in WATER will write a page / sample, post-paid, 25 cents, or Holder and Box of SIX Extra Inks, 50 cents. Extraordinary inducement to those out of employment. J. T. HILLIER, 306 Broadway, New York.

The Christian Union, of Sept. 5, 1877, says: "It is all it claims to be. We speak from a practical experience, for this notice is written with one of these pens, and we propose to carry it all the time."

## OF SPECIAL INTEREST TO

## Teachers and Professional Men,

And to all who, in consequence of overwork, or any other cause, find themselves suffering from a gradually increasing brain and nervous exhaustion, and who feel that they are slowly losing vitality and the power to do their best.

## COMPOUND OXYGEN TREATMENT.

**COMPOUND OXYGEN** is an agent which acts on scientific principles, and in complete harmony with natural laws and forces. It assists nature to remove the effete carbonaceous matters which have accumulated in the system in consequence of our bad habits of respiration, and thus restores to her the normal control of all the vital activities.

**COMPOUND OXYGEN** does not cure by the substitution of one disease for another, as when drugs are taken, but by an orderly process of re-vitalization. To the overworked Student or Professional Man, who finds himself slowly losing vitality and power to do his best, Compound Oxygen offers an almost certain means of relief and restoration.

Consumption, Chronic Catarrh, Oozes, Asthma, Dyspepsia, Diabetes Paralysis, and some of the most painful Nervous Disorders have yielded, in a very large proportion of cases, to its re-vitalizing and curative powers. **WHO HAVE BEEN CURED BY COMPOUND OXYGEN?** We could give the names of a large number of persons in all parts of the country, who have found relief and cure in this new treatment, but have only room for the following, to whom, by permission, we here refer: Hon. S. FIELD, Judge of the United States Supreme Court, and his accomplished wife; Mrs. HALLIE KILBURN; Judge SAMUEL SMITH, of New York; Hon. MONTGOMERY BLAIR; Ex-Governor BORMANN, West Virginia; Hon. WILLIAM D. KELLEY; T. S. ARTHUR and Gen. FITE HENRY WARREN.

The case Mr. T. S. ARTHUR, the well known American author, is a most remarkable one, as will be seen from the following, which is taken from Arthur's Illustrated Home Magazine of July, 1877. He says:—

"Nearly seven years have passed since we began using this treatment. Up to that period our health had been steadily declining; not in consequence of any organic disease, but from overwork and consequent physical and nervous exhaustion. The very weight of the body had become tiresome to bear, and we regarded our days of earnest literary work as gone forever. But almost from the very beginning of our use of the Compound Oxygen, an improvement began. There was a sense of physical comfort and vitality not felt for years, and this slowly but steadily increased. Literary work was resumed in a few months, the mind acting with a new vigor, and the body free from the old sense of weariness and exhaustion. A better digestion, an almost entire freedom from severe attacks of nervous headache from which we had suffered for twenty years, and from a liability to take cold on the least exposure, were the results of the first year's use of the new treatment; and this benefit has remained permanent. As to literary work in these years, we can only say that it has been constant and earnest; and its acceptance with the public may be regarded as any test of its quality, it is by far the best work that we have done."

**OXYGEN HOME TREATMENT.** This can be sent any distance in a small and compact package. Price for two months' supply, with inhaling apparatus, and full and explicit directions, \$15.00.

**FREE** A treatise on Compound Oxygen, its mode of action and results, to which are appended a large number of testimonials to most remarkable cures, will be sent free by mail to all who write to us for it.

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